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NAVY-OWNED OVERSEAS OCEAN TERMINALS, WHO SHOULD OPERATE THEM?

by

Theodore M. Edwards

and

Mark F. Seidl

March 1994

Principal Advisor: Dan C. Boger

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NAVY-OWNED OVERSEAS OCEAN TERMINALS, WHO SHOULD OPERATE THEM?

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ABSTRACT

The Navy currently operates eleven overseas ocean terminals while the Military Traffic Management Command (MTMC) operates sixteen. This study focuses on comparing Navy and MTMC overseas ocean terminals in the areas of booking, cargo accountability functions, billing systems, electronic data, in-transit cargo visibility, chain of command, mobilization, and rates. This data, which was obtained primarily from phone and personal interviews from terminal managers and comptroller personal at both Navy and MTMC terminals, is used to determine if it would be to the Navy's advantage to convert some, or all, of its overseas terminals to Navy-owned, MTMC-operated terminals. It is concluded that the Navy could benefit in several areas if the conversion to MTMC operations were made. A discussion of seven of these benefits is presented in expanded detail.

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TABLE OF CONTENTS

I. INTRODUCTION 1

A. BACKGROUND 1

B. OBJECTIVE OF THE RESEARCH 3

C. THE RESEARCH QUESTION 3

D. SCOPE AND LIMITATIONS OF THE RESEARCH 4

E. RESEARCH METHODOLOGY 5

F. ORGANIZATION OF THE STUDY 6

II. NAVY-OWNED OVERSEAS OCEAN TERMINAL OPERATIONS . . . 8

A. INTRODUCTION 8

B. PURPOSE 8

C. BACKGROUND 9

1. Naval Station Naples 10

2. Naval Station Rota 10

3. Naval Air Station Sigonella 11

4. Naval Station Guantanamo Bay 11

5. Naval Station Roosevelt Roads 12

6. Naval Air Station Keflavik 12

7. Naval Air Station Bermuda 12

8. Naval Air Station Adak 13

9. Fleet Industrial Supply Center Pearl Harbor 13

10. Fleet Industrial Supply Center Guam . . . 14

11. Fleet Industrial Supply Center Yokosuka . 15

D. ORGANIZATIONAL STRUCTURE 16

E. FUNCTIONS PERFORMED AT NAVY-OWNED OVERSEAS OCEAN TERMINALS 20

1. Secure Ocean Bookings 20

2. Cargo Handling 21

3. Cargo Accountability and Billing 21

4. Provide Modal Interface 24

F. SUMMARY 24

III. MTMC OCEAN TERMINAL OPERATIONS 26

A. INTRODUCTION 26

B. PURPOSE 26

C. BACKGROUND 27

D. ORGANIZATIONAL STRUCTURE 28

E. FUNCTIONS PERFORMED 29

1. Modal and Agency Interface 29

2. Billing 30

3. MILSTAMP System Administration 31

4. Cargo Accountability 32

5. Container Management 33

6. Freight Management Services 34

7. Cargo Clearance 34

8. Carrier Selection 35

9. Cargo Consolidation/Manifesting 35

10. Loss/Damage Claims 35

11. Record Maintenance 36

12. Passenger Service 36

F. SUMMARY 37

IV. REQUIRED OCEAN TERMINAL FUNCTIONS 38
A. INTRODUCTION/PURPOSE 38
B. REQUIRED FUNCTIONS 38
1. Cargo Accountability 38
2. Booking 40
3. Handling 41
4. Modal Interface 42
5. Financial Accountability 42
C. SUMMARY 43
V. COMPARISON OF NAVY AND MTMC TERMINAL OPERATIONS . . 45
A. INTRODUCTION 45
B. PURPOSE 45
C. BOOKING 46
D. CARGO ACCOUNTABILITY FUNCTIONS 47
E. BILLING SYSTEMS 49
F. ELECTRONIC DATA/IN-TRANSIT CARGO VISIBILITY . . 50
G. CHAIN OF COMMAND 52
H. MOBILIZATION 54
I. RATES 54
J. SUMMARY 59
VI. SUMMARY AND CONCLUSIONS 61
A. SUMMARY 61
B. CONCLUSIONS 64
C. AREAS FOR ADDITIONAL RESEARCH 66
LIST OF REFERENCES 67
INITIAL DISTRIBUTION LIST 70

I. INTRODUCTION

A. BACKGROUND

Under its charter, the Military Traffic Management Command (MTMC) of the U.S. Army has the responsibility of managing all common-user ocean terminals within the Continental United States (CONUS). In a cooperative effort to standardize cargo handling and the consolidation of cargo requirements for all Department of Defense (DoD) shippers, the U.S. Navy and U.S. Army have Interservice Support Agreements (ISSAs) allowing MTMC to manage cargo processing functions at Navy-owned CONUS ocean terminals. An ISSA is currently in effect at Naval Weapons Station, Concord, California; Naval Construction Battalion Center, Port Hueneme, California; Naval Weapons Station, Earle, New Jersey; and Fleet and Industrial Supply Center, Norfolk, Virginia.

Currently, Navy-owned overseas ocean terminals do not have similar agreements. As the Department of Defense continues to streamline operations through standardization in an effort to reduce costs, implementing MTMC operations at all DoD overseas ocean terminals is one possible approach to standardization. In addition to 15 CONUS terminals, MTMC currently operates the following 16 common-user, overseas ocean terminals:

1.	MTMC Terminal Okinawa	Naha, Japan
2.	MTMC Terminal Yokohama	Yokohama, Japan

3.	MTMC Terminal Pusan	Pusan, Korea
4.	Puerto Rico Detachment	San Juan, Puerto Rico
5.	Panama Outport	Balboa, Panama
6.	MTMC Terminal Benelux	Rotterdam, Netherlands
7.	MTMC Terminal Bremerhaven	Bremerhaven, Germany
8.	Rhine River Terminal	Mannheim, Germany
9.	MTMC Terminal UK	Felixstowe, UK
10.	MTMC Terminal Leghorn	Leghorn, Italy
11.	Terminal Transfer Unit	Pireaus, Greece
12.	Terminal Transfer Unit	Rota, Spain
13.	Lisbon Outport	Lisbon, Portugal
14.	Terminal Transfer Unit	Lazes Field, Azores
15.	Terminal Transfer Unit	Izmir, Turkey
16.	Iskenderun Outport	Iskenderun, Turkey

The Transportation Department of the Naval Supply System (NAVSUP Code 41) is tasked with establishing transportation policy within the Department of the Navy. Personnel at NAVSUP Code 41 have questioned the possibility of advantages for the Navy in adopting MTMC operations at the following Navy-owned, overseas ocean terminals:

1. Naval Station Rota, Spain
2. Naval Station Naples, Italy
3. Naval Air Station Sigonella, Italy
4. Naval Air Station Keflavik, Iceland
5. Naval Air Station, Bermuda
6. Naval Station Guantanamo Bay, Cuba

7. Naval Station Roosevelt Roads, Puerto Rico
8. Naval Air Station Adak, Alaska
9. Fleet and Industrial Supply Center Yokosuka, Japan
10. Fleet and Industrial Supply Center, Guam
11. Fleet and Industrial Supply Center Pearl Harbor, Hawaii

B. OBJECTIVE OF THE RESEARCH

The objective of this research effort is to provide data which may be used to determine if the Navy should adopt MTMC operations at some or all of the previous listed ocean terminals. In order to draw a conclusion, Navy and MTMC operations are examined and compared to determine the differences and identify possible advantages of one operation over the other. Specific emphasis is placed on the level of customer service provided by each operation to determine if one particular agency offers better service. It is also recognized that readiness may be enhanced by a standard operation, and this issue also is associated with the objective of this research.

C. THE RESEARCH QUESTION

In an effort to establish a base for the objective of this research, the following question was used as a focal point: Would the Navy benefit by converting some or all of its overseas ocean terminals to Navy-owned, MTMC-operated terminals?

Subsidiary questions which are relevant to this research are:

1. What are the similarities of Navy and MTMC ocean terminal operations?
2. What is different about Navy and MTMC ocean terminal operations?
3. Which functions of each operation enhance customer service?
4. What are some respective cost comparisons of the two types of operations?

D. SCOPE AND LIMITATIONS OF THE RESEARCH

The scope of this thesis provides a current analysis of the minimum necessary functions required at Navy and MTMC ocean terminals to process cargo for shipment. It compares those functions performed at Navy-owned ocean terminals with those performed at MTMC-operated ocean terminals and contrasts the services provided to customers by each type of operation. The scope also encompasses the issues of mobilization and enhanced technology in order to compare the services available under each type of operation with these concerns in mind. Readiness and the capability to expand operations to include other common-user traffic/cargo in the event of mobilization for a contingency are concerns that cannot be overlooked when determining the benefits of any Component provided by MTMC ocean terminal operations.

The scope of this thesis is limited with respect to the analysis of various costs for the respective operations. Rates vary due to the differences in computations and cost

data; this makes it difficult to obtain comparable measures. Another limitation is the lack of data available that would allow one to make comparisons based on specific customers, since both operations service different customers.

Also limiting the scope of this research is the emergence of a new system, the Worldwide Port System (WPS), that may very well eliminate any differences between the two types of operations. Since the Navy has agreed to adopt WPS, operations may be standardized to the point that the Component performing the service shouldn't make a difference in customer service.

E. RESEARCH METHODOLOGY

The methodology used for this thesis includes an examination of the two providers of ocean terminal operations. It focuses on the functions of:

1. Booking
2. Cargo Accountability Functions
3. Billing Systems
4. Electronic Data/In-transit Cargo Visibility
5. Chain of Command
6. Mobilization
7. Rates

In order to assess factors which could not be easily quantified, personal and phone interviews were conducted with comptroller and terminal management personnel at various overseas Navy terminals, the Naval Construction Battalion,

Port Hueneme, and operational managers and specialists at MTMC Western Area Headquarters. Interviews were also conducted with senior management personnel at the Naval Supply Systems Headquarters Code 41 and the United States Transportation Command (USTRANSCOM).

F. ORGANIZATION OF THE STUDY

Chapter II provides background on the eleven active Navy-owned overseas ocean terminals. It focuses on the customers served, functions performed, and operational organization at these eleven terminals. Chapter II also provides detailed information on the documenting and tracking systems used at the facilities, and some discussion on the types and amounts of material that pass through the eleven terminals.

Chapter III focuses on the services provided by MTMC and the systems used at the ocean terminals managed by MTMC. It provides a background of MTMC, its organization and structure, and the functions performed for its customers at common-user ocean terminals.

Chapter IV identifies and discusses those functions that must be performed at ocean terminals, regardless of whether they are performed by an individual agency or collection of agencies. It focuses on those functions that are pertinent for the movement of all DoD cargo passing through military ocean terminals.

Chapter V compares Navy and MTMC terminal operations and focuses on the different systems used to book, to document and

account for cargo, and to bill customers. It also discusses customer service provided by the Navy and MTMC, and how each of these functions may impact on that service. Also discussed in Chapter V is electronic data and how its use enhances in-transit cargo visibility and ultimately customer service. Chapter V then compares the differences in rates charged by each operation and the variations in services provided by the Navy and MTMC.

Chapter VI summarizes this research and provides conclusions about the findings. It also offers recommended areas for further research.

II. NAVY-OWNED OVERSEAS OCEAN TERMINAL OPERATIONS

A. INTRODUCTION

As discussed in Chapter I, there are currently eleven active Navy-owned overseas ocean terminals. These terminals have historically been used to provide fleet support for forward deployed naval forces. At each c these terminals, naval forces are not only able to quickly ship and receive numerous supplies, but can also receive additional requirements such as fuel and repairs.

In recent years however, Navy-owned overseas ocean terminals have begun to play greater roles in supporting multi-service operations. Continued compliance with the Goldwater-Nichols Act and recent doctrine published by both the Department of the Navy (DoN) and the Department of Defense (DoD) suggest that this trend will continue in the future. [Ref. 1]

B. PURPOSE

This chapter focuses on the customers served, functions performed, and operational organization of the eleven Navy-owned overseas ocean terminals. Detailed information will also be provided on the documenting and tracking systems used at these facilities and on the types and amounts of material that the terminals move.

C. BACKGROUND

Following World War II the United States Navy was able to obtain access to a number of strategically located ports throughout the Pacific, Atlantic, and Mediterranean regions. The Navy used these ports to help facilitate a worldwide presence, and in the process eventually began homeporting naval vessels and air squadrons at these sights. As operations at these facilities continued to expand, separate terminal sites were established where incoming and outgoing cargo could be more easily received and shipped.

From the 1950's through the mid 1980's little concern for support of other than Navy operations existed at these terminals. After all, during this period over 90 percent of the cargo moved at these facilities was for the Navy. Following the 1983 invasion of Grenada and subsequent lessons learned, much greater emphasis was placed on the coordination of joint service operations. Consequently, in the mid to late 1980's, the Navy-owned ocean terminals began handling greater amounts of Air Force and Army cargo. [Ref. 2]

Today over 75 percent of the cargo moved at these terminals is still for support of Navy operations. However, the trend of increased Air Force and Army cargo moved at these sites is expected to continue. [Ref. 2] A more detailed look at who the individual terminals serve and the type of cargo that they move follows:

1. Naval Station Naples

The terminal at Naval Station Naples is the primary transhipment point for all of DoD's central European forces. This not only includes Naval forces belonging to the Sixth Fleet, but also Army and Air Force facilities in Italy and Southern France. Nearly 80 percent of the total tonnage of cargo moved at the terminal is for Navy support. At the present time almost 85 percent of the cargo moved through the port is containerized. In recent months there has been an increase of breakbulk cargo consisting mainly of large vehicles such as trucks, ambulances, and bulldozers. This increase can primarily be attributed to the terminal serving as one of the entry points for equipment destined for United Nations efforts in the nearby Balkans. [Ref. 3]

2. Naval Station Rota

The terminal at Naval Station Rota primarily serves as the initial resupply point for Naval forces commencing operations in the Mediterranean. Over 90 percent of the cargo moved through the port is for the Navy. The remainder belongs mainly to the Air Force, which still maintains a small presence at the recently closed Terrajon Air Base just east of Madrid. The Rota terminal also receives freight for Portugal based Air Force personnel. This occurs because Portuguese port customs are very time consuming and difficult to pass through. Once a week the Air Force will drive trucks into

Rota to pick up their cargo. Almost 90 percent of the cargo processed at the port is containerized. [Ref. 4]

3. Naval Air Station Sigonella

The terminal at Naval Air Station Sigonella provides extensive refueling support for over 140 Air Force and Naval aircraft stationed on the island of Sardinia. Sigonella is also the primary refueling site for Sixth Fleet oilers in the (CLF) Combat Logistics Force and (NFAF) Naval Fleet Auxiliary Force. Currently over 1.4 million gallons of JP-5 (jet fuel) are received and transferred each month at the terminal. During Desert Shield/Desert Storm this figure amounted to almost 5 million gallons per month.

The Sigonella terminal also serves as a primary satellite for the Naples terminal. Over 40 percent of the freight moved through Sigonella is first manifested through Naples. Forty-three tenant activities are supported out of Sigonella. Navy cargo represents almost 65 percent of the total cargo moved through the port. Over 70 percent of the total cargo processed is containerized. [Ref. 3]

4. Naval Station Guantanamo Bay

The ocean terminal at Guantanamo Bay primarily serves Naval units which are conducting Central or South American operations, or undergoing refresher combat training by the Atlantic Fleet Training Group (FTG). During 1993 significant cargo requirements were received at the terminal for support of Haitian refugee encampment efforts. Over 85 percent of the

material processed through the terminal is for the Navy. Over 90 percent of the cargo moved is containerized. [Ref. 5]

5. Naval Station Roosevelt Roads

The terminal at Naval Station Roosevelt Roads also provides substantial support for deployed naval units conducting operations in the Central or South American regions. However, nearly 45 percent of the cargo moved through the terminal is for support of Army operations at either Fort Buchanan or Antigua. Container shipments account for over 85 percent of the total cargo moved through the terminal. [Ref. 2]

6. Naval Air Station Keflavik

The ocean terminal belonging to Naval Air Station Keflavik is actually located at the Port of Njardvik, which is located about 15 miles away from the air station. Approximately two sailings per month come into the Njardvik port. Icelandic freight carriers are employed to transport the material by rail or truck to the air station. Nearly 60 percent of the cargo processed at the port is for Navy support. The remainder is for support of Air Force and Army exercise functions. NAS Keflavik frequently plays key roles in sustaining NATO operations. Almost 90 percent of the material moving through the port is containerized. [Ref. 6]

7. Naval Air Station Bermuda

The terminal at Naval Air Station Bermuda serves as a transhipment point for material transiting the Atlantic. The

terminal also serves as a frequent logistics support point for Naval vessels transiting the Atlantic independent of CLF or NFAF assets. The terminal also supports Naval and Air Force aircraft missions. Nearly 75 percent of the material moved at the terminal is for support of the Navy. Almost 85 percent of the cargo processed at the terminal is containerized. [Ref. 2]

8. Naval Air Station Adak

The terminal at Naval Air Station Adak primarily exists to support Naval aircraft squadron operations. The terminal does provide occasional support for the Army's Fort Richardson and for Elmendorf Air Force Base. Over 95 percent of the cargo processed through the port is for the Navy. Nearly 90 percent of the total cargo processed is containerized. [Ref. 2]

9. Fleet Industrial Supply Center Pearl Harbor

The ocean terminal at FISC Pearl Harbor is the largest and busiest of the Navy-owned overseas ocean terminals. Aside from supporting a large military presence throughout the Hawaiian Islands, the terminal also serves as a major transhipment point for several Far East and Pacific ports. Over 75 percent of the material processed through the port is for support of Navy operations. However, there is significant business generated by both the Army and Air Force. The Army in particular uses the terminal to move large amounts of unit

cargo required for participation in major military operations such as Team Spirit and Cobra Gold.

Because of the large volume of material processed through the port there is a MTMC Ocean Cargo Booking Office (OCBO) located at the terminal to assist in securing ocean bookings. The OCBO also helps to ensure the timeliness and accuracy of cargo manifests. Container shipments account for approximately 68 percent of the cargo processed through the port. [Ref. 7]

10. Fleet Industrial Supply Center Guam

The ocean terminal at FISC Guam is the second largest of the Navy-owned overseas ocean terminals. Material for support of the CLF and NFAF make up nearly 40 percent of the cargo processed through the terminal. FISC Guam is tasked with providing logistical support for the CLF units on station in the Persian Gulf as well as for DOD forces located on Diego Garcia, the United Arab Emirates, and Bahrain. These are relatively new taskings since prior to June of 1992 these responsibilities were performed by the Naval Supply Depot Subic Bay. FISC Guam is also tasked with providing support for DoD operations on the Marianas and the Bonin Islands. [Ref. 8]

Nearly 85 percent of the cargo processed at the port is for support of the Navy. Container shipments account for almost 70 percent of material moved at the terminal. The majority of break bulk cargo comes in via Military Sealift

Command (MSC) controlled vessels and is processed at Navy controlled wharfs. No special clearance procedures are required for this material. However container cargo, which primarily comes in via commercial carriers, must receive clearance from the Port Authority of Guam, Guam customs, and depending on the commodity, special clearances from territorial agencies for agriculture, the EPA, and the fire department. [Ref. 8]

11. Fleet Industrial Supply Center Yokosuka

The ocean terminal at FISC Yokosuka exists primarily to support Seventh Fleet operations. Significant support is given to the fuel department, which is the largest, busiest, and most extended in DoD. Almost 85 percent of the material processed through the terminal is for the Navy. Very limited amounts of breakbulk cargo are processed at the Yokosuka terminal. The MTMC terminal at Yokohama, which is located approximately 15 miles to the north, handles the vast majority of this cargo and transports it down to Yokosuka on a daily basis. [Ref. 9]

During calendar year 1992, the eleven Navy-owned overseas ocean terminals moved over 2,455,000 measurement tons (MTONS) of Department of Defense material. However, over 76.1 percent of this material was moved through the three busiest terminals at Pearl Harbor, Guam, and Yokosuka. Out of the total material moved, 1,908,854 MTONS or 77.7 percent was for Navy or Marine Corps purposes. Incoming shipments accounted

for 1,652,299 MTONS or 67.3 percent of the total material moved. Table 1 summarizes 1992 throughput totals by service consignee.

TABLE 1. 1992 THROUGHPUT TOTALS

Activity	Volume	Navy/MC	Other DOD	Incoming	Outgoing
Naples	141,200	112,960	28,240	90,368	50,832
Rota	67,625	54,776	12,849	45,985	21,640
Sig.	32,700	21,255	11,445	20,438	12,262
Gtm. Bay	86,900	79,948	6,952	56,485	30,415
Rsvt. Rd	71,290	34,219	37,071	42,766	28,524
Keflavik	68,260	42,320	25,940	39,522	28,738
Bermuda	75,800	56,212	19,588	44,127	31,673
Adak	41,900	40,455	1,445	25,908	15,992
Pearl Hb	904,756	708,967	195,789	578,953	325,803
Guam	503,240	342,203	161,037	338,379	164,861
Yokosuka	461,710	415,539	46,171	369,368	92,342
Totals	**2,455,381**	**1,908,854**	**546,527**	**1,652,299**	**803,082**

(All figures are in MTONS)

D. ORGANIZATIONAL STRUCTURE

Terminal managers at Navy-owned overseas ocean terminals report directly to the supply officer of the activity at which the terminal is located. For instance, the ocean terminal manager at NAS Rota works directly for the NAS Rota supply officer. At FISC Pearl Harbor, FISC Guam, and FISC Yokosuka, the activity supply officer is the commanding officer. At all of the other terminals, the supply officer is one of several

department heads who report to the activity commanding officer.

Several of the terminals operate under a structure which has a separate chain of command for administrative and operational responsibilities. Administrative responsibilities pertain to items such as funding, manning, assists, and inspections. Operational responsibilities include tasks such as overseeing day-to-day operations, preparing for and conducting exercises, and mobilizing for war. [Ref. 1]

Administrative guidance for the terminals is promulgated through several different activities. In the Mediterranean, the terminals at Rota, Naples, and Sigonella have administrative guidance promulgated by the Commander in Chief Naval Forces Europe (CINCUSNAVEUR). In the Atlantic, Commander Naval Shore Facilities Atlantic (COMNAVSHORELANT) assumes administrative control for Keflavik, Bermuda, Roosevelt Roads, and Guantanamo Bay. In the Pacific, Commander Naval Forces Pacific (COMNAVAIRPAC) maintains administrative control for Adak, while the three FISC terminals at Pearl Harbor, Guam, and Yokosuka have their administrative control jointly promulgated by both the Defense Logistics Agency (DLA) and the Naval Supply Systems Command (NAVSUP). The three FISC terminals are also in the process of being converted to Defense Business Operating Fund (DBOF) activities. The activities in the DBOF are required to set rates for their services which will cover the full cost of operations. The services provided by the

remainder of the ocean terminals are funded through the annual appropriations cycle. (Differences between DBOF and non-DBOF terminals and the impact which it has on the rate structure will be discussed in greater detail in later chapters.)

Operational guidance for all Navy-owned overseas ocean terminals is promulgated under the unified command structure by the respective fleet commander, either Commander-in-Chief U.S. Atlantic Fleet (CINCLANTFLT) or Commander-in-Chief U.S. Pacific Fleet (CINCPACFLT). [Ref 10] A breakdown of the administrative and operational chain of command is summarized in Table 2.

TABLE 2. NAVY-OWNED OVERSEAS TERMINALS CHAIN OF COMMAND

Activity	Admin Commander	Oper. Commander
NS Naples	CINCUSNAVEUR	CINCLANTFLT
NAS Rota	CINCUSNAVEUR	CINCLANTFLT
NAS Sigonella	CINCUSNAVEUR	CINCLANTFLT
NS Guantanamo Bay	COMNAVSHORELANT	CINCLANTFLT
NS Roosevelt Roads	COMNAVSHORELANT	CINCLANTFLT
NAS Keflavik	COMNAVSHORELANT	CINCLANTFLT
NAS Bermuda	COMNAVSHORELANT	CINCLANTFLT
NAS Adak	COMANVAIRPAC	CINCPACFLT
FISC Pearl Harbor	DLA/NAVSUP	CINCPACFLT
FISC Guam	DLA/NAVSUP	CINCPACFLT
FISC Yokosuka	DLA/NAVSUP	CINCPACFLT

All Navy-owned overseas ocean terminals follow procedural guidance stipulated in the Military Standard Transportation and Movement Procedures (MILSTAMP). Type Commander, Fleet Commander, and local command instructions do exist in order to cover contingencies which are not fully addressed in the MILSTAMP. [Ref. 1]

The Directors of Transportation Logistics Policy at CINCPACFLT and CINCLANTFLT serve as the overall points of contact for terminal managers on operational issues. However, numerous intermediate points of contacts exist and must often be consulted before the fleet commander will act on an issue. [Ref. 10]

Ocean terminal managers are either Navy Supply Corps Officers, usually in the grade of commander, or Department of Defense civil servants at the GS 13 or 14 level. The selection of military officers to serve as terminal managers is performed by the Naval Supply Systems Command (NAVSUP). Officers selected to assume these positions usually have had at least one prior tour dealing with military logistics, and are graduates of either the Navy's Transportation School located in Oakland, CA or the Transportation Logistics Management Curriculum at the Naval Postgraduate School in Monterey, CA. [Ref. 11]

Civilian terminal managers are required to interview for their positions. No specific schooling is required, however most civilian terminal managers have received training

comparable to that given at the Navy Transportation School, and have worked an average of at least six years in positions dealing with military logistics. [Ref. 12]

E. FUNCTIONS PERFORMED AT NAVY-OWNED OVERSEAS OCEAN TERMINALS

All Navy-owned overseas ocean terminals are capable of serving as a shipment, receiving, or transhipment point. Each terminal is also capable of handling large breakbulk or container traffic. Broad general functions which are performed at each terminal are as follows: [Ref. 13]

1. Secure Ocean Bookings
2. Perform Cargo Handling
3. Maintain Accountability over Cargo (Includes Billing)
4. Provide Modal Interface to Deliver to the Consignee, Next Port of Entry, or Next Port of Debarkation

1. Secure Ocean Bookings

Bookings for required cargo space are made on either DoD or commercial contracted vessels. The Military Sealift Command (MSC) assists the Navy in securing ocean bookings on all DoD vessels. MSC has detachments in Yokohama, Japan; Agana, Guam; and Bremerhaven, Germany to assist terminal managers in making maximum use of DoD assets. Normally DoD vessels are used to transport breakbulk cargo. Operational orders for DoD vessels are issued in the Pacific region by the Commander Logistic Support Group Pacific (COMLOGPAC, formerly CTF-73) and in the Mediterranean and Eastern Atlantic

regions by the Commander Logistic Support Group Mediterranean (COMLOGMED or CTF-63). [Ref. 8]

If the Navy overseas terminal does not have a MTMC OCBO, MSC will also assist in securing ocean bookings on commercially contracted vessels. Commercial vessels are normally contracted if the terminal has a steady, repetitive need to transport large amounts of containerized cargo.

2. Cargo Handling

The majority of material handling responsibilities are accomplished by stevedoring contracts which are individually negotiated at each of the Navy-owned overseas ocean terminals. Each of the contracts in place at the Navy terminals requires that the stevedores abide by the MILSTAMP. The number of stevedores used at each terminal varies in relation to the amount of cargo moved and whether it is predominately containerized or in breakbulk. The rates charged for stevedoring services also varies and is strongly influenced by prevailing wage rates in the local area. [Ref. 8]

Due to economic constraints, military personnel play greater roles in handling cargo at some of the smaller terminals such as Adak and Sigonella. Key cargo handling military personnel at these terminals are required to have had training on the MILSTAMP.

3. Cargo Accountability and Billing

There is no one standardized automated cargo documenting and tracking system in place at the Navy-owned ocean

terminals. Prior to 1980, automated systems were used very sparingly in Navy-owned overseas ocean terminal operations. When computers became more affordable and prevalent in the mid 1980's, programs were frequently written by local data processing personnel to improve productivity at the terminals. These local programs succeeded somewhat in making operations more efficient, but since they were often designed independently, they usually lacked the capability of properly interfacing with systems used at other terminals. [Ref. 14]

The Pearl Harbor terminal uses a system developed in 1982 known as the Automated Shipment Documentation System (ASDOCS). This system can be used to create cargo manifests, generate Transportation Control Movement Documents (TCMDs), and produce required financial reports. According to the FISC Pearl Harbor freight terminal officer, ASDOCS is an adequate, easy to learn system, but like most of the documenting and tracking systems used at the Navy-owned overseas terminals, it has the drawback of not being fully compatible with any other systems used in the defense transportation system. ASDOCS was also written to be used with a Burroughs mainframe. This has created another potential problem since FISC Pearl Harbor is scheduled for conversion over to an IBM mainframe in June of 1994 in order to become fully compatible with the DLA data bases. [Ref. 7]

Partly because of the mainframe compatibility problem, FISC Pearl Harbor has been selected by NAVSUP and MTMC to be

one of the two Navy-owned overseas test sights for summer 1994 implementation of the Worldwide Port System (WPS). Naval Station Naples is the other Navy-owned overseas test sight. WPS will take advantage of new developments in bar coded technology to provide complete origin-to-destination visibility of all material entered into the system. It is anticipated that WPS will be installed at all of the MTMC terminals, including the four Navy-owned CONUS sites, by the end of calendar year 1995. [Ref. 14]

The Yokosuka and Guam terminals use a cargo tracking and documenting system known as Ocean Cargo Manifesting System (OCMS). This system was written in 1992 by a First Class Data Processor Petty Officer from the Naval Supply Depot Subic Bay. OCMS also creates cargo manifests and generates TCMDs, but it does not provide input to produce financial reports. All inputs from the ocean terminal to the comptroller's office at these locations must be done manually. OCMS is compatible with an IBM mainframe. [Ref. 15]

In mid 1993 NAVSUP and MTMC began evaluating terminal operations and facilities at Naples, Sigonella, Rota, and Keflavik to determine if OCMS should be implemented at those sites. Results of these implementation decisions are scheduled to be made in mid 1994. [Ref. 14]

The terminals at Guantanamo Bay, Roosevelt Roads, Bermuda, and Adak rely primarily on other locally written systems and manual methods to meet their cargo documenting and

tracking needs. Evaluations on possible implementation of OCMS at these sites are not expected to be made until at least calendar year 1995. [Ref. 14]

4. Provide Modal Interface

Since water transport lacks point-to-point connectivity, it is imperative that other transportation modes be used to ensure proper delivery or pick up of cargo requirements. Each Navy terminal manager employs, and supervises, civilian or military truck drivers who transport incoming and outgoing cargo. Rail tracks also exist at most of the terminals, however the use of rail to transport DoD cargo is not nearly as great as it was in the 1950's and 1960's.

Each of the Navy-owned overseas terminals is located in close proximity to either a Naval Air Station or Air Force Base. At the NASs, both the air and ocean terminal managers work for the Supply Officer. At the other sites, Interservice Support Agreements (ISSAs) or Memorandums of Agreement (MOUs) are in place which allow the air and ocean terminals to support one another. However, since MILSTAMP requires that cargo be designated as either an air or surface requirement, the use of an air-and-ocean designated shipment on a single TCMD is not that prevalent. [Ref. 8]

F. SUMMARY

Navy-owned overseas ocean terminals have traditionally been used to provide fleet support services. However, in

recent years there has been a greater emphasis on using these terminals to support operations of other services.

The vast majority of material moved at the Navy-owned overseas ocean terminals occurs at FISC Pearl Harbor, FISC Yokosuka, and FISC Guam. Over 75 percent of the total material moved at all of the Navy overseas is for Navy support. Over 70 percent of the material moved is containerized.

The majority of the Navy terminals have separate chains of command for administrative and operational functions. However, all of the terminals adhere to procedural guidance stipulated in the MILSTAMP. The same set of broad basic functions are performed at each of the Navy terminals although no firm standardization exists among the terminals to ensure that the functions are performed in exactly the same manner.

There is not a standardized automated cargo tracking and documenting system currently in place at the Navy-owned overseas ocean terminals. The Worldwide Port System is scheduled for implementation during the current year at FISC Pearl Harbor and Naval Station Naples. This system should significantly improve cargo traceability and enhance communication with the MTMC terminals. The Ocean Cargo Manifesting System is currently used at FISC Yokosuka and FISC Guam and is being considered for implementation at Naval Station Naples, Naval Air Station Sigonella, Naval Air Station Rota, and Naval Air Station Keflavik.

III. MTMC OCEAN TERMINAL OPERATIONS

A. INTRODUCTION

The Military Traffic Management Command is the Department of Defense's global traffic manager. MTMC is a component command under the U.S. Transportation Command (USTRANSCOM) whose first priority is readiness. MTMC focuses on strategic mobility by providing the following major services: traffic management, operation of common-user ocean terminals, management of DoD-owned rail cars, and transportation engineering. As DoD's traffic manager, MTMC is responsible for acquiring commercial transportation services for the movement of freight, personal property, and passengers by air, rail, motor, pipeline, inland waterway, ocean or any combination of modes. [Ref. 16]

B. PURPOSE

This chapter will focus on the services provided, and the systems used by MTMC at all ocean terminals that it commands or manages. MTMC manages and operates military ocean terminals worldwide. Specifically, MTMC has military ocean terminals and outports in CONUS, Northern Europe, the Far East, the Mediterranean, and in Panama. In CONUS, MTMC directly operates 11 terminals and controls operations at four US Navy common-user terminals by means of Interservice Support Agreements (ISSAs). MTMC is in fact the DoD common-user water

terminal manager in CONUS. Overseas, MTMC and the US Navy independently operate 16 and 11 common-user water terminals, respectively. [Ref. 17]

C. BACKGROUND

MTMC was activated on 15 February 1965 as the Military Traffic Management and Terminal Service, a single manager operating agency under the Secretary of the Army. It was redesignated to MTMC on 31 July 1974, and on 1 October 1987, MTMC became a component of USTRANSCOM. MTMC, within its mission, provides transportation planning to the Organization of the Joint Chiefs of Staff, USTRANSCOM, Unified and Specified Commands, Military Departments, Military Services, the Office of the Secretary of Defense, and DoD Agencies in support of strategic mobility, contingency and deployment plans, and other military operations as required, including sustainment of theater logistics. MTMC, with its mission to meet military transportation needs in peace and war, places an emphasis on service and economy by determining how traffic is to move and maintaining the control necessary to assure responsiveness to shipper requirements. [Ref. 18]

In addition to the four service components, other DoD customers of MTMC include: Defense Logistics Agency (DLA), Army and Air Force Exchange Service (AAFES), General Services Administration (GSA), Navy Exchange (NEX), and the Defense Commissary Agency (DECA). [Ref. 19] The cargo belonging to these customers consists of anything from repair parts to

perishables, and includes explosives and other hazardous material, as well as large outsized pieces of equipment. Commodities are normally listed as Containers, Explosives, General Cargo, or Vehicles. [Ref. 20]

D. ORGANIZATIONAL STRUCTURE

As stated earlier, MTMC is a subordinate command of USTRANSCOM along with the Air Mobility Command (AMC) and the Military Sealift Command (MSC). MTMC consists of a Headquarters Command at Falls Church, Virginia, which includes a Field Operating Activity, and four subordinate commands that provide support to regional areas of the globe.

MTMC Command Eastern Area is located at Bayonne, New Jersey, and operates water terminal facilities and provides surface movement for DoD cargo in peace and war within the geographical area assigned by Headquarters, MTMC. Eastern Area MTMC also manages the operation and maintenance of the Defense Freight Railway Interchange Fleet (DFRIF), and monitors the DoD international airlift cargo and passenger movements and procedures.

MTMC Western Area located in Oakland, California, has a subordinate Terminal Command headquartered in Seoul, Korea, which is responsible for common-user ocean terminals in the Far East. Western Area MTMC operates ocean terminals and outports in CONUS and the Far East, and conducts traffic management activities. Western Area also administers the Military Sealift Command (MSC) shipping and container

agreements, and international cargo bookings with commercial ocean carriers. In addition, Western Area operates four MTMC Air Traffic Coordinating Units to ensure the orderly flow of military cargo and passenger traffic within the airlift system.

MTMC Europe, headquartered in Rotterdam, Netherlands, commands water terminal operations in the European and Mediterranean theaters. These operations include receipt, booking, handling, documentation and port clearance of DoD-sponsored cargo, and planning support for mobilization and other military operations. MTMC Europe executes the assigned portion of the HQMTMC Terminal Operations Program and functions as MSC's representative in assigned areas.

MTMC Transportation Engineering Agency (TEA), located in Newport News, Virginia, is the final subordinate command of MTMC and provides the scientific, engineering, and transportation expertise to analyze and improve the transportability of military equipment and Army units. The TEA also evaluates the effectiveness of the DoD transportation programs for national defense. [Ref. 18]

E. FUNCTIONS PERFORMED

1. Modal and Agency Interface

To fully understand the services provided by MTMC serving in the capacity as the common-user water terminal manager, it is important to understand how ocean terminals are linked to other modes. MTMC provides the interface between

DoD shippers and the commercial carrier industry, the Air Mobility Command, and the Military Sealift Command. To enhance this service and provide traffic management data for DoD components, MTMC developed and now operates four integrated transportation information systems. These systems are: Department of the Army Standard Port System Enhanced (DASPSE), Terminal Support Module (TMS), Terminal Management System (TERMS), and the Mediterranean Prototype. Where and how these systems are used will be addressed later in this section. These systems are scheduled to be replaced by the Worldwide Port System (WPS) beginning around the middle of 1994. Although the shippers determine what and when cargo is to be moved, MTMC determines how and by what route the cargo is to move and sets up the controls necessary to accomplish the task. This means that when a shipper offers cargo to MTMC for movement, MTMC arranges for any motor, air, rail or ship transportation necessary to move the cargo from origin to destination and provides this service to the shipper for a single charge.

2. Billing

MTMC is a DBOF or revolving-fund activity. The working capital of this fund initially finances the services provided to MTMC's customers, who are then billed to reimburse the fund. MTMC publishes its port handling billing rates yearly in Department of the Army Circular 55-92-9. This provides a standard DBOF billing arrangement for the various

cargo types for MTMC's customers. These rates apply only to MTMC controlled operations and do not include rates applied by MSC. Port handling rates are based on the forecasted measurement ton (MTON) cargo workload which is sent in by defense shippers. Basically, the tariff rates are calculated by dividing the forecasted workload into chargeable expenses. These rates are calculated for various commodity categories. The rates are set well in advance of the fiscal year and may be changed only with the approval of the Office of the Secretary of Defense (OSD). This provides stability for the military services' transportation planning and budgeting. [Ref. 21]

Billing for MTMC ocean terminal operations is accomplished by the Financial Management System (FMS). This system extracts tonnage movement data and the shipper's Transportation Account Code (TAC), which is a four-digit, alpha-numeric billing address, from one of the four information systems. The tonnage movement data consists of the commodity, cube, and port facility handling the cargo. FMS applies the appropriate rate from the rate billing guide, and a single bill for port handling is charged to the TAC. [Ref. 22]

3. MILSTAMP System Administration

Besides setting and publishing rates, MTMC ensures that cargo movement services are provided in accordance with MILSTAMP. MTMC accomplishes this by conducting periodic evaluations to determine MILSTAMP system effectiveness and by

providing clarification and uniform interpretation of the requirements of the MILSTAMP system. MTMC serves as USTRANSCOM's key point of contact for MILSTAMP surface transportation systems development and design. An important aspect of this role requires that MTMC maintain close liaison with the carrier industry to promote compatibility with commercial documentation systems. [Ref. 13] The standard codes, data elements, and formats in MILSTAMP allow MTMC to automate its cargo processing, whenever possible, from receipt at the port of embarkation (POE) until discharge at the port of debarkation (POD).

4. Cargo Accountability

Cargo accountability includes documenting and tracking cargo by establishing Transportation Control Movement Documents (TCMDs). MTMC documents cargo in accordance with MILSTAMP, and uses four main systems to automate the standard codes required for TCMDs. These automated TCMDs also allow MTMC to track cargo by its assigned information data. Documenting and tracking is accomplished using one of the following automated systems.

The DASPSE is the main system used by MTMC to document cargo. All CONUS ports and MTMC OCONUS ports, excluding the Mediterranean, use this system to automate the processing of cargo traffic through the transportation system. The Mediterranean ports use a system known as the Mediterranean

Prototype, which is a progressive system that has been piecemealed to assist port facilities in this area to automate their operations. TERMS is the system used by CONUS ports during exercises only to automate cargo manifesting. It is used in conjunction with TMS, the system that processes the data contained on bar code labels.

Although these systems automate the documentation for cargo accountability, their major shortcoming is the fact that information cannot be shared directly between systems. This means that in order to track cargo through the transportation pipeline, documentation data must be passed from port-to-port using automated messages as a means of interface. As mentioned earlier, these systems are scheduled to be replaced by WPS, which will be managed by MTMC. [Ref. 23]

5. Container Management

Under its charter as the DoD single manager, MTMC also provides operational management of defense intermodal common-user containers. In order to procure, track, and return containers, MTMC has established a systematic worldwide DoD surface container management and control method in coordination with the military services, MSC, and theater commands. Through standardized procedures, MTMC disseminates information to theater commands regarding SEAVAN tenders for delivery of cargo to CONUS inland destinations. Container information is maintained in shipping data held by the four automated

information systems, and is passed via automated message to receiving destinations. [Ref. 18]

6. Freight Management Services

In addition to management and information services provided for customers, MTMC provides or arranges for all terminal services and port operations including contracting for stevedore and terminal handling services. MTMC receives, processes, and forwards cargo transiting terminals it operates or manages. This includes storage and security (when necessary), recoopering, remarking, repacking, documentation, and similar services. MTMC also provides its customers with receipt and lift data for shipments moving by water through terminals it operates or manages.

7. Cargo Clearance

MTMC operates Ocean Cargo Clearance Authorities (OCCAs) and Ocean Cargo Booking Offices (OCBOs) to accomplish surface traffic management and contract administration functions for DoD cargo moving via surface intermodal transportation. These offices deal directly with ocean carriers and allow MTMC to manage DoD shipments from origin to destination. [Ref. 18] When cargo arrives at the port, MTMC becomes responsible for storage, if necessary, and stowage aboard the ship, whether the ship is MSC owned or commercially owned. Each shipment of cargo processed through ocean terminals is documented to identify its characteristics for

terminal operations, financial accounting, customs, and cargo visibility.

8. Carrier Selection

OCCAs select the ocean carrier through MSC since MSC may charter ocean vessels while MTMC may not. OCCAs also book the cargo to commercial or government ships and administer ocean carrier agreements and serve as the Administrative Contracting Officer (ACO) for MSC. Shippers must obtain clearance from MTMC in order to export cargo, and the OCCAs are responsible for controlling export shipments. This assures the lowest delivered costs consistent with service requirements. [Ref. 13]

9. Cargo Consolidation/Manifesting

MTMC also arranges for all cargo handling at ocean terminals to include the loading and unloading of MSC-controlled ships. One aspect of handling is the consolidation of small shipments. This may require remarking, repacking, and documentation for manifesting. Once the cargo is loaded, MTMC prepares the consolidated manifest to provide ports of debarkation with shipment data. OCCAs maintain coordination with theater commanders and provide for the diversion of cargo or ships with the sponsoring service's concurrence.

10. Loss/Damage Claims

Another service for all cargo movement, and included in ocean terminal operations, is the DoD cargo loss and damage reporting and analysis system. With systematic procedures,

MTMC supports shippers to prevent loss and damage. MTMC also reviews and makes recommendations for settlement of claims by or against commercial carriers and/or the Government arising out of agreements, tenders, tariffs, or contracts for transportation and transportation-related services. [Ref. 18]

11. Record Maintenance

MTMC maintains full and complete statistical records concerning surface traffic moving in the sealift system through terminals it operates or manages. [Ref. 13] This enables MTMC to plan, program, and execute measures to modernize and improve common-user ocean terminal operations as necessary to provide an effective and efficient complement to improved strategic mobility systems. [Ref. 18] MTMC advises overseas commands and sponsoring services of anticipated workload surges resulting from political decisions, natural disasters, strikes, local or national regulatory action, or other actions which may affect normal traffic flow. As the single peacetime and wartime interface with theater traffic managers, MTMC facilitates contingency water terminal expansion. [Ref. 13]

12. Passenger Service

In the event that passengers are required to travel by ship, MTMC plans, programs, schedules, and manages the flow of CONUS-originated passenger movements to and through ocean terminals. [Ref. 18]

F. SUMMARY

MTMC's operations and interface with theater traffic managers provide a broad array of services at ocean terminals for the shipment of freight and passengers routed through these terminals. The services provided extend beyond ocean terminals and link cargo movement with other modes as necessary. MTMC's peacetime, transition-to-war, and wartime roles are identical, and the existing automated cargo documentation systems remain constant as do communications with defense shippers and commercial/defense carriers. This consistency allows MTMC to provide the necessary cargo handling and processing functions and the same quality of service for all shippers within the DoD during both peacetime and wartime.

These functions include receiving and accounting for cargo; booking the cargo for shipment; any physical handling necessary to consolidate, load, or unload the cargo; coordinating connecting transportation services; and handling the financial billing or reimbursement for services rendered. In addition, MTMC manages the shipping containers for the DoD; administers the MILSTAMP by evaluating its effectiveness; and maintains statistical records of cargo moving through the sealift system. This information is useful in helping customers process claims for lost or damaged cargo. MTMC also handles the movement of passengers in the event they pass through ocean terminals.

IV. REQUIRED OCEAN TERMINAL FUNCTIONS

A. INTRODUCTION/PURPOSE

The movement of DoD cargo through military ocean terminals is dependent on a multitude of functions that must be accomplished regardless of whether they are performed by an individual agency or collection of agencies. This chapter will focus on those functions that are pertinent for the movement of all DoD cargo passing through military ocean terminals.

B. REQUIRED FUNCTIONS

In accordance with the MILSTAMP, certain functions must be performed for the proper processing of all DoD cargo through ocean terminals. The following are the minimum necessary requirements:

1. Cargo Accountability

Cargo accountability involves the documentation process for cargo that traces the movement of cargo from its point of entry into the system to its final destination. Accountability includes documenting the receipt of cargo at the ocean terminal, maintaining records to be forwarded to the next destination, and processing claims of loss or damage that occurs within the transportation system.

Accountability is established using Transportation Control Movement Documents (TCMDs). A TCMD is prepared for

all shipments entering the transportation system. Once a shipment reaches the ocean terminal, the TCMDs are altered or completed as necessary after the shipment is consolidated with others and stuffed into containers. Any discrepancies (overage, shortage, or damage) are reported in accordance with Joint Regulation AR55-38. Before containers are sealed at the ocean terminal, a TCMD is prepared for the container, listing the contents, along with the container information (van number, POE, and stop-off indicator). The container information is also added to the TCMDs received from the shipper for each shipment in the container.

Ocean cargo manifests are prepared for each Port of Debarkation (POD) and segregated according to the type of vessel or loading method. Manifests are normally distributed in automated record format or by an alternative arrangement when automated facilities do not exist.

After a shipment is complete, records detailing the actions undertaken and a Transportation Control Number (TCN) are maintained. A TCN is a 17 character data element assigned to control and manage every shipment throughout the transportation pipeline. For this reason, the TCN for each shipment is unique and never duplicated. The TCN is part of the data contained on the TCMD, and for container shipments, the TCN is constructed and assigned by the OCCA. This information is

used to trace shipments to locate cargo within the transportation system and to assist shippers with claims for loss or damage that may occur. [Ref. 13]

2. Booking

Booking involves the process of securing cargo space aboard a ship for routing and movement purposes, and obtaining export clearances for the cargo. Booking may be for the movement of cargo aboard a commercial carrier or aboard a DoD-owned and operated vessel.

As stated earlier, when cargo is offered for movement, the shipper prepares a TCMD for the cargo in accordance with the MILSTAMP. The TCMD provides the clearance authorities, ports, receivers, and other interested transportation personnel with advance notice of shipments, and the information necessary to process the shipments through the Defense Transportation System (DTS). The information on the TCMD is the basis for the preparation of all air and surface manifests. Since most shippers do not regularly generate full container loads of cargo for direct shipment to receivers, shipments from multiple shippers are combined by Consolidation and Containerization Points (CCPs).

The CCP begins the booking process by projecting the requirements for containers. The cargo does not have to be physically located at the ocean terminal in order for the CCP to determine the container requirements. Forecasts are often made based on experience and insight into future trends.

Container requirements are developed for each destination and this information is provided to the OCCA/booking office which books the container requirement with an appropriate ocean carrier. Once the booking is secured, the OCCA/booking office furnishes the ocean terminal agency with a block of TCNs, one per container.

Another aspect of booking is the preparation of a stow plan. The military activity responsible for the ocean terminal prepares the pre-stowage plan when MSC-controlled shipping is used. The OCCA/booking office coordinates the preparation and implementation of pre-stowage with commercial operators when cargo is loaded on MSC-arranged commercial ships. [Ref. 13]

3. Handling

Handling of cargo involves any physical application necessary to process or move the freight. It includes consolidating small shipments when necessary to maximize available space and the repacking/reworking that may accompany this process. It also includes any storing and security required for the cargo and the loading/unloading of containers and vessels.

Container loading is accomplished as cargo is received and consolidated. When containers are loaded at ocean terminals, the operating agency maintains unit shipment integrity. Recoopering, remarking, repacking, and similar services necessary for safe onward movement may be provided at the

ocean terminal. If the shipment was not prepared by the shipper according to military standards, adequate preparation may take place at the ocean terminal to prevent loss or damage. [Ref. 13]

4. Modal Interface

Modal interface involves coordinating the movement of cargo to the ocean terminal or for forward movement to the consignee. This may include one or several combinations of transport depending on the cargo characteristics, its routing, and availability of assets. The ocean terminal agency coordinates directly with ocean carrier agents for pickup of full containers moving to the ocean terminal. The linehaul of containers is generally specified by the OCCA under the terms of the MSC Container Agreement and Rate Guide. The service is provided by ocean carriers through interline agreements with commercial linehaul carriers. The military terminal activity responsible for ocean terminal operations begins arranging onward movement of cargo upon receipt of the vessel manifest. The priority of movement is first-in/first-out unless the Required Delivery Date (RDD) or advice by the sponsoring service indicates an overriding urgency. Local procedures are established to document forwarding of cargo from the ocean terminal to the consignee. [Ref. 13]

5. Financial Accountability

Financial accountability involves establishing rates for various services and applying those rates equitably for

all customers. It includes billing customers for services performed and reimbursement for any or all services performed under contractual arrangements. A bill of lading is prepared to document ocean transportation of DoD cargo by common carrier ocean service which is not arranged and paid for under MSC Shipping Contract, Shipping Agreement, or Container Agreement. The bill of lading is a contract document between the carrier and the government and provides a means for the carrier to be paid for the service performed while accounting for the cargo shipped.

All repacking, holding, or diversion costs are added to the handling charges included in the final bill to the customer. When a customer fails to release empty containers within the free time allowed by ocean carriers, detention charges are assessed and billed separately from the transportation charges. [Ref. 13]

C. SUMMARY

This chapter has focused on the minimum functions necessary in order to process and move cargo through ocean terminals. These functions deal simply with the receipt, documentation, and handling of cargo as well as coordinating connecting transportation services and billing requirements. In addition to the necessary functions mentioned, for purposes of mobilization, military ocean terminal operations should have the ability to expand and handle joint operations for contingency missions. This is necessary in order to handle

the large increase in the flow of cargo that may pass through ocean terminals supporting a contingency operation.

V. COMPARISON OF NAVY AND MTMC TERMINAL OPERATIONS

A. INTRODUCTION

Chapters II and III showed that the various functions performed at Navy and MTMC overseas ocean terminals are basically the same. This is not surprising since both types of operations perform these functions in accordance with the MILSTAMP, which is a DoD standardized document. Chapter IV outlines the minimum functions that are necessary to move cargo through ocean terminals, regardless of which service operates the terminal. There are however notable differences in how the Navy and MTMC terminals accomplish some of their functions, and in the rates that they charge for freight management services.

B. PURPOSE

This chapter will focus on the different methods (systems) used to book, document and account for cargo, and to bill customers. In addition this chapter will discuss customer service provided by the Navy and MTMC, and how each of these functions may impact on that service. It will also discuss Electronic Data and how its use enhances in-transit cargo visibility for customers. Also discussed in this chapter is the impact the chain of command may have on the customer service level, as well as mobilization as a service to customers and how this service may be affected by the

abilities of the Navy and MTMC. Finally this chapter will discuss the difference in rates charged by each operation and compare these rates to the variations in services provided by the Navy and MTMC.

C. BOOKING

Both the Navy and MTMC rely on Ocean Cargo Booking Offices to arrange transportation aboard commercially owned ships. Both agencies rely on MSC to charter MSC-owned or commercial vessels. In some cases where the ocean terminal lacks a Booking Office, the Navy deals directly with MSC to arrange commercial bookings.

The major difference is in Navy operations where the Navy has access to Combat Logistics Force or Naval Fleet Auxiliary Force vessels. Bookings for these vessels are mandated by the respective Logistics Support Group Commander. These vessels predominately serve the Navy as the single customer. If MTMC managed the operations for common-user cargo at Navy-owned overseas ocean terminals, common-user customers would not gain the benefit of CLF or NFAF vessels since MTMC does not have access to their use. On the other hand, the Navy would not lose the use of CLF ships if MTMC managed Navy-owned terminals. This situation currently occurs at FISC Norfolk which is a Navy-owned, MTMC-operated ocean terminal. From the standpoint of the Navy as the customer, there is only one benefit gained if MTMC managed common-user ocean terminals. This benefit is eliminating the Navy's need to act as its own

booking agent. From a sound business perspective, it is usually prudent to allow functional experts to handle those aspects of operations to enhance the process.

D. CARGO ACCOUNTABILITY FUNCTIONS

Both the Navy and MTMC document and track cargo by preparing TCMDs for shipments, based on the MILSTAMP. Information contained on TCMDs is standard data required by the MILSTAMP for various commodities or types of shipments. There are however, several major differences in the systems used by each to prepare these documents.

The various systems used by the Navy are not only incompatible with each other, but are also incompatible with the systems used by MTMC. This creates a problem of inter-terminal data sharing which is a necessary requirement to maintain visibility of common-user cargo in transit. In order to make necessary preparations to receive and transship cargo, terminals need to know what is expected to arrive and when to expect it. Since the systems do not interface, this information must be transferred from terminal to terminal by automated message [Automated Defense Information Network (AUTODIN)]. This is where quite a bit of data is lost within the system, since it must be manually transferred to message format. The requirement to manually transfer information often creates a time lag which prevents the receiving terminal from obtaining the data until after the shipment has already arrived. [Ref. 23] Another shortcoming of this method of

transferring data is the fact that the need for AUTODIN adds another step in the process.

MTMC has similar problems with the systems it uses to account for cargo. Although the main system used throughout MTMC operations is the DASPSE, this system can't interface with the other MTMC systems, nor can it interface with terminals using the DASPSE automated documentation process. In order to pass data from terminal to terminal, the requirement to use AUTODIN exists for MTMC as well as for the Navy.

Although each agency shares the same problems with systems compatibility, MTMC enforces the timeframes specified in MILSTAMP for manifest forwarding. They also receive shipment data more quickly from other MTMC operated terminals than from Navy operated terminals. [Ref. 24]

From the standpoint of the customer, quicker notification of incoming cargo facilitates more efficient handling at the port and more efficient arrangement for forward movement. However, as mentioned in Chapters II and III, systems used by the Navy and MTMC are scheduled to be replaced by WPS beginning in 1994. This system will allow for instant communication between terminals without the need for AUTODIN. If MTMC were to assume management of Navy-owned overseas ocean terminals, the Navy would not be required to provide the manning and training needed for WPS operation. Even if the Navy retains management of their operations once they adopt

the Worldwide Port System, information within it will be useless unless it is accurate and can be used to control or affect the process. The system will be more efficient if a single agency controls the input and is responsible for system management.

E. BILLING SYSTEMS

Billing is a function where there is considerable difference between the methods currently used by the Navy and MTMC. Within Navy-owned ocean terminal operations, Pearl Harbor is the only overseas terminal which currently has an automated interface with the comptroller's office. The other ten Navy-owned overseas terminals must rely on manually reproduced data to create a bill for each customer. These bills are then logged at the comptroller's office and customer's accounts are subsequently charged. Quite often Navy customers submit a voucher to prepay anticipated transportation costs on a quarterly basis. This means that expected transportation needs must be calculated based on past history, or a best estimate is provided based on anticipated operations. In either case, a certain amount of budget planning is required to fulfill obligations. Although Guam and Yokosuka do not have financial interface, these facilities are DBOF activities which allows them to preclude the need to prepay transportation costs. This is one benefit that users of DBOF have over other activities which are funded by other-type accounts. Since DBOF is a revolving fund, it provides working capital

for DoD industrial and commercial activities that provide common services among the DoD Components. This concept is similar to using a credit card where users enjoy the benefit of someone else's money, and provide reimbursement after they are billed.

Since all MTMC ocean terminal operations are DBOF funded activities, no requirements exist for any of MTMC's customers to prepay shipping costs. The Financial Management System also allows MTMC to bill customers with an automated method. This system extracts the necessary information from automated shipping documents and then charges the appropriate billing address based on the Transportation Account Code.

There are two benefits the Navy could gain from MTMC operations in relation to billing. The first is an enhanced service to shippers. Customers would no longer need to plan for and prepay shipping costs. Anytime a function is made easier for the customer, there is value added to the service. The second benefit would come from a more streamlined system which could lead to reduced manning. Key management personnel at the Port Hueneme terminal, which is one of the four Navy conus terminals managed by MTMC, conservatively estimate that MTMC's billing system could reduce manning at Navy-owned overseas terminals by at least two billets each. [Ref. 21]

F. ELECTRONIC DATA/IN-TRANSIT CARGO VISIBILITY

Both the Navy and MTMC rely heavily on the civilian transportation industry to move their assets from ocean

terminal to ocean terminal. As the industry evolves and moves further into the electronic mode of doing business, both Navy and MTMC operations must evolve with it in order to remain competitive and offer their customers an enhanced service at a low cost.

In-transit visibility (ITV), the ability to continuously track cargo throughout the transportation pipeline, offers the customer instant information on their shipments. This gives them greater flexibility by providing the means to control or change the end result of their service. Continuous in-transit visibility also reduces the likelihood of a lost shipment since its location is instantly updated by electronic means.

Currently, MTMC is in the forefront of moving into the use of Electronic Data Interchange (EDI) and providing ITV, as proven by their development of the Worldwide Port System. As WPS becomes part of the Global Transportation Network (GTN), vast information for transportation services will be instantly available to customers. The concept of GTN is a network of information systems that provide transportation information to the user, regardless of where the data resides. [Ref. 25]

At present, MTMC is an active user of the GTN and EDI in acquiring transportation and related services to move freight for DoD customers. The use of EDI has greatly streamlined MTMC's operations by reducing time and paper used in the process. They began exploring the use of EDI in the late 1980s to enhance the processing of rates submitted by carriers

[Ref. 26], and their experience in the field places them in a better position to combine all aspects of ocean-terminal operations into an integrated process.

The Navy could benefit from MTMC operations since MTMC is currently in a better position to stay abreast of advancing technology and expand the use of EDI. In addition, the electronic tracking process would be valuable for all users. Electronic data would be more efficient, accurate and less costly. A paperless interchange of information which could eliminate all paperwork moving with a shipment would also allow customers to directly access the GTN computer network for instant information and cargo visibility. Providers who use EDI become better through faster and more efficient service. Electronic Data Interchange can offer reduced booking time, improved carrier/customer relationships, streamlined data requirements, improved accuracy in data and reporting, and overall improved customer service. The use of EDI also reduces expenses through reduced paper handling and time involved in the process, and lost cargo.

G. CHAIN OF COMMAND

As discussed in Chapter II, Navy-owned overseas ocean terminals currently function under several distinct chains of command. This contrasts significantly with the more centralized MTMC chain of command which reports directly to the United States Transportation Command. From the Navy's

perspective, there is the perception that a multiple-structured chain of command enables unique issues to be addressed more quickly by the responsible decision-making activity. This emphasis on speed and flexibility often disregards correct documenting and accountability of cargo as specified in the MILSTAMP. Naval operations often require material to be received or shipped within short timeframes, and cargo is often squeezed on a shipment without being manifested. [Ref. 24]

The lack of a centralized chain of command, however, has allowed other types of problems to continue. As depicted by the numerous automated cargo-documenting and tracking systems that the Navy uses, there is a lack of standardization among the Navy-owned overseas ocean terminals. The decentralized command structure of Navy-owned overseas terminal operations allows variations of MILSTAMP adherence to exist. Examples of this can be demonstrated by the marginal compliance of Navy terminals with the requirement to transmit cargo manifest data, and by the large amounts of cargo that the Navy terminals process without documentation. [Ref. 24]

As the customer, the Navy could benefit from MTMC operations since the centralized command structure would help enforce standard business practices, standard operating procedures, and provide a single agency interface.

H. MOBILIZATION

Since MTMC's peacetime, transition-to-war, and wartime roles are identical, MTMC as the single overseas ocean terminal manager could facilitate a more rapid expansion of water terminals for short-notice contingencies. The existing automated cargo documentation systems, including connectivity arrangements, remain constant, as do interfaces with defense shippers and commercial and DoD carriers. This allows MTMC to provide customers with a single point of contact for contingency planning and execution, whereas ocean terminal management by the Navy provides common users with an additional middleman in the process. A single command structure can manage big picture arrangements and offer a better service for mobilization to all DoD customers. As a joint player in mobilization and contingency support, the Navy, as a customer, will benefit from this single manager concept as well.

I. RATES

There are also substantial differences between the rates charged for similar services at Navy-owned overseas terminals and the rates used at MTMC terminals. The following table compares the rates charged for the most commonly used services, at the four largest Navy-owned overseas ocean terminals, with those charged at the MTMC Far East and MTMC European Area terminals.

TABLE 3. RATE COMPARISONS BETWEEN MTMC AND NAVY OVERSEAS TERMINALS

Commodity	Pearl	Guam	Yokohama	MTMCWA	Naples	MTMCEA
BREAKBULK						
General	31.40	44.40	(2)	39.24	37.60	64.87
POV	1.40	(1)	(2)	16.30	3.80	17.98
Roll Stk	17.35	25.87	(2)	14.78	17.68	23.07
CONTAINER						
General	11.30	17.00	17.23	18.37	15.85	19.09
Reefer	25.30	48.23	80.51	29.34	40.75	41.87
Prov.	14.20	25.30	33.80	50.34	21.25	80.49
POV	10.75	24.00	15.62	24.88	16.10	25.72
Dir Van	.70	1.87	3.20	10.04	1.10	4.25

All rates are per MTON

Notes: (1) Rates for Guam Breakbulk POV shipments not available

(2) The MTMC terminal at Yokohama initially receives all breakbulk shipments for Yokosuka

In most cases, the rates charged by MTMC are slightly higher than those charged by the Navy. In those cases where MTMC rates are lower, the volume of like commodities allow for a lower unit rate handling charge. Based on the method used to calculate rates (explained later), economies of scale produce a lower rate for high volume commodities.

Although MTMC's rates, on average, are higher than Navy rates, MTMC's automated systems and constant connectivity arrangements allow them to provide a more consistent and streamlined service for customers. MTMC's more extensive data

base provides the customer with a more technologically advanced process. The customer has better visibility of cargo in the transportation system, and the likelihood of lost/ damaged cargo is significantly reduced. [Ref. 24] This puts MTMC in a better position to provide interface between DoD shippers, the civilian transportation industry, AMC, and MSC.

Both the Navy and MTMC use the same basic method to compute the various rates that they charge to move certain commodities. The steps involved in this computation are:

1. Determine the total costs required for the total tonnage moved the previous fiscal year.
2. Compute the percentage of total costs which were attributed to moving each individual type of commodity.
3. Prorate the individual percentages by the total cost to determine the amount to move each commodity.
4. Divide the individual commodity amount into the total MTONS moved. This determines the commodity rate per MTON. [Ref. 27]

There are significant differences in how the Navy and MTMC compute their total costs. Since the MTMC terminals are DBOF activities, they are required to include all of their direct and overhead costs into their total cost computations. The overhead costs include such expenses as salaries of administrative personnel, and production and office maintenance. At the present time the Navy terminals exclude overhead expenses in their computation of total costs. The exclusion of these expenses alone accounts for significantly lower rates. The three FISC terminals, which have been designated as DBOF

activities, are not expected to adopt procedures for accounting of overhead expenses until 1995. [Ref. 28] Consequently, the Navy terminals can provide services for a lower rate than MTMC since they exclude overhead expenses from their costs.

Once DBOF billing procedures are adopted at the three FISC terminals it is expected that their rates will rise significantly. However, according to informed DoD terminal managers, the rates charged at the Navy DBOF terminals will still be lower than those charged by the MTMC terminals in the same geographic region. This can primarily be explained by the fact that MTMC historically spends more to train personnel and maintains extensive data bases which provide Defense Transportation System information. [Ref. 12]

With this in mind, an opinion can be formed to support the position that the added cost associated with a better trained workforce and a more extensive transportation data base is outweighed by enhanced customer service. Some pertinent comments and facts available to help reach such an opinion are:

1. Currently, MTMC operations enhance the booking process by reducing the time of information exchange, since MTMC operates the OCBOs and the Navy uses them to book cargo aboard commercial ocean carriers.

2. During FY 1991, 1992, and 1993 the MTMC terminals reported, on an average, a slightly lower percentage of cargo lost in shipment than what Navy terminals reported. [Ref. 29]

3. Over the past five years, cargo manifests produced by Pearl Harbor, Guam, and Yokosuka, have had significantly lower accuracy rates than the manifests produced from MTMCWA ocean terminals. [Ref. 23]

4. Over the past five years, cargo manifests generated from Pearl Harbor, Guam, and Yokosuka, had a higher percentage of late transmissions than those produced from MTMCWA ocean terminals. [Ref. 23]

5. The extensive data bases of MTMC include detailed information on recommended stowage plans for numerous CLF, NFAF, and commercial vessels. Additionally, MTMC employs experienced loading specialists who are capable of coordinating all aspects of a vessel loadout. Loading specialists currently serve at each of the four Navy CONUS terminals which have an ISSA in place with MTMC. [Ref. 12]

6. The use of EDI by MTMC has streamlined their operations by reducing time and paper used in the process.

7. The existing automated cargo documentation systems used by MTMC, including connectivity arrangements, remain constant, as do interfaces with defense shippers and commercial and DoD carriers. This consistency of peacetime and wartime roles enable MTMC to facilitate a more rapid expansion of water terminals for short-notice contingencies and mobilization planning.

8. Extensive yearly training is available for MTMC personnel to ensure they are familiar with advancing technology and are proficient in the performance of their tasks. [Ref. 24]

9. The adoption of MTMC managed operations has the potential to provide the Navy with increased opportunities for Joint coded assignments. Joint assignments are viewed by all Components as career enhancing and a requirement for advancement to certain levels.

From these comments and facts, one can support an argument that a Navy-owned, MTMC-operated terminal would result in an operation which is more capable of moving cargo with greater reliability, efficiency, and accuracy. This argument is supported by the individuals whom we interviewed who have had experience with both MTMC and Navy styles of operations. To determine if the costs saved by improved reliability and visibility are enough to offset the benefits of lower rates is

subjective at best. However, if the Navy is going to remain competitive and provide their customers with enhanced services, they must invest in the technology and training which will allow them to do so.

J. SUMMARY

For the most part, Navy ocean terminal operations and MTMC ocean terminal operations perform the same functions for processing cargo through their respective terminals. Since the MILSTAMP requires certain functions, both types of operations are bound to perform them. However, the differences between these operations are the various systems they use to accomplish cargo accountability functions and billing. For each operation, the systems do not interface with each other or with other terminals. Currently, MTMC is in a better position to provide systems interface and access to the GTN to broaden the transportation information base and provide better in-transit visibility.

The chain of command for MTMC operations is also more centralized and provides customers with a consistent, single point of contact. The consistency within MTMC operations extends throughout the roles and functions performed by MTMC, and provides all customers with standardization for mobilization planning and contingency support.

There is also some variation between the rates charged by the Navy and MTMC for providing services to ship similar commodities. In most cases, MTMC's rates are slightly higher,

but the service they provide for their customers is more streamlined and provides a larger source of data for movement planning.

VI. SUMMARY AND CONCLUSIONS

A. SUMMARY

The purpose of this report was to determine if the Navy could benefit by converting some, or all, of the Navy-owned overseas ocean terminals to Navy-owned, MTMC-operated terminals. The procedures used to derive an opinion on this issue first involved analyzing the operations of both Navy and MTMC terminals. Next an analysis was conducted to determine what functions are required to be performed at an ocean terminal regardless of which service operates it. Following this, the Navy and MTMC operations were compared to one another in the areas of: booking, cargo accountability functions, billing systems, electronic data/in-transit cargo visibility, chain of command, mobilization, and rates.

The analysis of Navy-owned overseas terminal operations, (Chapter II) revealed that over 75 percent of the cargo moved through these terminals is Navy-specific material. However, in recent years there has been a gradual increase in the amount of Air Force and Army cargo moved through these facilities. The current emphasis on joint operations suggests that this trend will continue over the next several years. Another finding was that over 70 percent of the material moved through all of the Navy-owned overseas terminals is moved

through the terminals located at FISC Pearl Harbor, FISC Guam, and FISC Yokosuka.

The majority of the Navy terminals have separate chains of command for administrative and operational functions. No firm standardization exists among these terminals to ensure that functions are performed in the same manner. Of specific interest is the fact that several different automated cargo tracking and documenting systems are currently in place at the Navy overseas terminals. These systems were often designed independently, and consequently little compatibility currently exists for these systems to properly interface with one another. To help correct this situation the Navy has agreed to implement the MTMC-designed Worldwide Port System at two of their overseas terminals during 1994.

The analysis of MTMC ocean terminal operations (Chapter III) revealed that a greater degree of standardization exists at the MTMC terminals. The chain of command is more centralized in MTMC's organization than it is in the Navy thus providing a more streamlined organization for standardized procedures. The ocean terminals report to either MTMC Eastern Area or MTMC Western Area. The two area commands report to MTMC Headquarters who in turn reports to USTRANSCOM. Since MTMC is a DBOF, or revolving fund, activity the revolving capital of the fund initially finances the services provided to MTMC's customers. This provides a standard billing arrangement for the various cargo types. Additionally, MTMC's

billing rates are standardized within the respective area commands.

MTMC's peacetime, transition-to-war, and wartime roles are identical, and the existing automated cargo documentation systems remain constant as do communications with defense shippers and commercial and defense carriers. This consistency allows MTMC to provide the necessary cargo handling and processing functions with the same quality of service for all shippers within DoD during both peacetime and wartime.

The analysis of required terminal functions (Chapter IV) revealed that at least the functions dealing with receipt, documentation, and handling of cargo, as well as coordinating connecting transportation service and billing requirements, must be performed at all ocean terminals. In addition, military ocean terminals must have the ability to expand and handle joint operations for contingency missions. This capability is necessary in order to handle the expected large increases in cargo which occur during contingency operations.

The comparison of Navy and MTMC terminal operations (Chapter V) revealed that for the most part, Navy ocean terminal operations and MTMC terminal operations perform the same functions. There is however a notable difference in the billing rates charged at the MTMC terminals with those charged for similar services at the Navy terminals. The higher rates charged by MTMC are primarily attributed to large overhead

expenses for training of personnel and maintenance of transportation system data bases. Since MTMC is a DBOF activity their rates are also based on full costing, and when Navy ocean terminals fully adopt DBOF procedures their rates will increase. In return for the higher rates, evidence in this report supports the opinion that MTMC terminals are more capable of moving cargo with greater reliability, efficiency, and accuracy. This report also supports the claim that MTMC is currently in a better position to provide systems interfaces, more reliable in-transit visibility, larger sources of data for movement planning, and standardization for mobilization planning and contingency support.

B. CONCLUSIONS

As stated above, the primary research question posed by this study was:

> Would the Navy benefit by converting some, or all of it's overseas ocean terminals to Navy-owned, MTMC operated terminals?

The conclusion is:

> **The Navy could benefit and, in the process, could also improve the performance of the current MTMC terminals.**

If the current Navy-owned overseas ocean terminals became Navy-owned, MTMC-operated terminals, improvements in cargo manifest accuracy would probably be easily achieved. Greater attention would undoubtedly be placed on manifesting all material placed on a shipment. Additionally, there would be more emphasis on ensuring that receiving terminals obtain

manifests with sufficient time to have the proper equipment and personnel on hand to process the shipments as efficiently as possible.

Improved cargo visibility should also be achieved if MTMC operated the Navy overseas terminals. At the present time MTMC is the military leader in incorporating the latest technology to improve the tracking of cargo. Their experience with EDI could help the Navy not only reduce losses in shipment, but also reduce booking time, improve carrier and customer relationships, streamline data requirements, and enhance overall customer service.

The Navy could also benefit from MTMC's extensive data bases and training levels. The use of MTMC's load planning capabilities would enable the Navy to handle and load a wide variety of different types of cargo with minimal difficulty. This capability could become increasingly more important as the Navy overseas terminals continue to handle greater amounts of Air Force and Army material. The increased reliance on automated systems at freight terminals has created the need to have a more skilled and capable work force. The strong commitment to training that MTMC currently has could help to ensure that personnel at Navy terminals reach the desired skill levels to get the most out of the automated systems.

Since MTMC's peacetime, transition-to-war, and wartime roles are identical, MTMC terminals can facilitate more rapid expansion on short-notice contingencies. The Navy terminals

could certainly benefit from this capability since the dual Navy chain of command structure could possible hinder rapid mobilization efforts. If the Navy terminals operated under a centralized command structure, it would be easier to enforce standard business practices and operating procedures. It would also give the Navy terminals a single agency interface to which they can address problems or make recommendations.

C. AREAS FOR ADDITIONAL RESEARCH

1. Within a year after the implementation of the Worldwide Port System at FISC Pearl Harbor and Naval Station Naples, research what benefits have been realized.

2. Research the impact that DBOF has had on Navy-owned overseas terminals once they fully adopt DBOF standards.

3. Research the capabilities that Navy-owned overseas terminals currently have for mobilization of short-notice contingencies.

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